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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/651,594	08/29/2003	Tim Murphy	501039.03	8917

7590 11/15/2004
Steven H. Arterberry, Esq.
DORSEY & WHITNEY LLP
Suite 3400
1420 Fifth Avenue
Seattle, WA 98101

EXAMINER

BEREZNY, NEMA O

ART UNIT	PAPER NUMBER
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2813

DATE MAILED: 11/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/651,594

Applicant(s)

MURPHY ET AL.

Examiner

Nema O Berezny

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to Applicant's Amendment filed 9-8-04, which has been entered and considered. Claims 19-36 are currently pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 19-23, 25, 28-32, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sudo (5,198,684) in view of Nhu (5,237,441). Sudo discloses a method of transferring data between a chip (Figs.1,2 el.30) disposed on a chip package (el.10,40A,40B), the chip package including a plurality of conductive components (el.60), the method comprising: receiving an electronic signal from a bonding pad; converting the electronic signal to an electromagnetic signal; transmitting the electromagnetic signal; receiving the electromagnetic signal; converting the received electromagnetic signal to an electronic signal; and applying the electronic signal to a conductive component of the chip package (col.6 lines 33-61). Sudo also discloses receiving an electronic signal from a conductive component, and applying the electronic signal to a bonding pad of the chip (col.6 lines 33-61). However, Sudo does not disclose a chip including memory circuitry having control, address, and data signals, the chip further having bond pads coupled to the memory circuitry to transfer control,

Art Unit: 2813

address, and data signals to and from the circuitry. Sudo would look to one such as Nhu for coupling the memory to an executing device because Nhu discloses a chip including memory circuitry having control, address, and data signals, the chip further having bond pads coupled to the memory circuitry to transfer control, address, and data signals to and from the circuitry (col.3 lines 24-27). Therefore, it would have been obvious to a person skilled in the art at the time of the invention to use the memory chip of Nhu with the method of Sudo in order to couple memory capability to an executing device (Nhu - col.3 lines 24-27) **[claims 19, 28]**.

Based upon the rejection of claims 19 and 28 above, Sudo also discloses wherein the operation of transmitting the electromagnetic signal comprises transmitting the electromagnetic signal through an intermediate layer away from the chip without the transmission propagating first through the chip (Fig.4; col.5 lines 51-56; col.6 lines 19-23, 6-8) **[claims 20, 29]**; wherein the operation of transmitting the electromagnetic signal through an intermediate layer comprises transmitting the electromagnetic signal through an adhesive layer (Fig.4 el.80) having an index of refraction allowing the electromagnetic signal to pass therethrough (col.6 lines 1-12) **[claims 21, 30]**; wherein the operation of transmitting an electromagnetic signal comprises emitting a laser signal (e1.40B) **[claims 22, 31]**; wherein the operation of transmitting an electromagnetic signal comprises emitting an optical signal (e1.40A) **[claims 23, 32]**; and wherein the operation of transmitting the electromagnetic signal comprises transmitting the electromagnetic signal through the chip itself (col.6 lines 33-61) **[claims 25, 34]**.

Claims 24, 26-27, 33, and 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sudo in view of Nhu as applied to claims 19 and 28 above, and further in view of Austin et al. (5,200,631). Sudo discloses coupling the silicon chip (el.75) to the chip package, but Sudo in view of Nhu do not disclose encapsulating the chip and chip package, or transmitting an infrared signal. However, Sudo and Nhu would look to one such as Austin for package protection and to enable emission of wavelengths outside the visible wavelength range because Austin discloses encapsulating the first surface of the chip package, the entire chip, and the intermediate layer with an encapsulating layer (Fig.1 el.26) [**claims 24, 27, 33, 36**]. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to use the encapsulation of Austin with the method of Sudo and Nhu in order to protect the package from moisture, and chemical and mechanical stress.

Sudo and Nhu would also look to one such as Austin for wavelength emission outside the visible wavelength range because Austin discloses wherein the operation of transmitting an electromagnetic signal comprises emitting an infrared signal (col.4 line 57 - col.5 line 22) [**claims 26, 35**]. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to use the infrared signal of Austin with the method of Sudo and Nhu in order to emit wavelengths outside of the visible wavelength range (col.4 line 65 - col.5 line 1).

Response to Arguments

Applicant's arguments with respect to claims 19-36 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nema O Berezny whose telephone number is (571) 272-1686. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr. can be reached on (571) 272-1702. The fax phone

Art Unit: 2813

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NB


CARL WHITEHEAD, JR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800